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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,360	08/01/2003	Yoshikatsu Itoh	542-015.002	3983

4955 7590 03/09/2005

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EXAMINER	
BERMAN, SUSAN W	
ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/632,360

Applicant(s)

ITOH ET AL.

Examiner

Susan W Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/03 & 10/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

***Specification***

The disclosure is objected to because of the following informalities: The word "origomer" in the Abstract and throughout the specification should be changed to "oligomer".

Appropriate correction is required.

***Claim Objections***

Claims 1-5 are objected to because of the following informalities: the word "origomer" should be "oligomer". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "polymer ... have (has) a glass transition point of 0<sup>0</sup> to 70<sup>0</sup>C, respectively" in claim 1 renders the claims indefinite. Does applicant intend to set forth that the polymer of reactive oligomer and/or reactive prepolymer has a Tg of 0<sup>0</sup>C and the polymer of the reactive diluent is 70<sup>0</sup>C? Does applicant intend to set forth a range of Tg values for one of or for each polymer? If so, does each polymer have the same Tg value or a different Tg value? It is suggested that the phrase should read "each polymer ... has a glass transition point between 0<sup>0</sup> and 70<sup>0</sup>C". See the specification from page 6, line 25, to page 7, line 24.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Ylitalo et al (6,558,753, filed 11/09/2000). Ylitalo et al disclose compositions for ink jet printing comprising an oligo/resin and a reactive diluent with a colorant and photoinitiator (column 4, line 65, to column 5, line 8). Oligo/resins are taught in column 10, lines 12-19. Monomers for reactive diluents are taught in column 11, line 20, to column 12, line 27. Preferred monomers to be included have a Tg of at least 50<sup>0</sup>C. The compositions disclosed by Ylitalo et al are considered to anticipate the instantly claimed compositions because the oligo/resins and reactive diluent monomers disclosed correspond to those disclosed in the instant specification as having the Tg properties set forth in the instant claims.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Murphy et al (6,040,357). Murphy et al disclose radiation curable ink compositions comprising a pigment dispersion, radiation curable oligomer and monomer and a photoinitiator (column 9, lines 26-45). The ink coatings have a Tg of at least 30<sup>0</sup> C(column 4, lines 23-28). Oligomers having a Tg of about 65<sup>0</sup>C and about 42<sup>0</sup>C are disclosed and reactive diluents are used to adjust viscosity (column 5, line 6, to column 6, line 52).

Claims 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Erickson et al (H1517). Erickson et al disclose radiation curable ink compositions comprising a liquid viscous epoxidized diene polymer having a relatively low viscosity, such as about 5000 cps, and a pigment. Reactive diluents may

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be added. See the Abstract, column 5, line 60, to column 6, line 32, column 7, lines 49-67, and the Examples.

Claims 3-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Yurugi et al (6,767,980, filed 04-19-2002). Yurugi et al disclose a reactive diluent composition comprising a vinyl ether group-containing (meth)acrylate and a hydroxy group-containing polymerizable compound and having a viscosity from 0.1 mPa.s to 1500 mPa.s at 25<sup>0</sup>C (Abstract and column 4, lines 43-59). The reactive diluent is used in compositions comprising a curable resin, such as a macromonomer or prepolymer having a polymerizable group and a viscosity between 1.5 Pa.s at 25<sup>0</sup> C and 100,000 Pa.s at 80<sup>0</sup>C (column 16, lines 28-58). The viscosity of the compositions is preferably 0.5 mPa.s to 100,000 mPa.s at 25<sup>0</sup> C (column 18, lines 54-61). Photoinitiators are taught in column 22, lines 55-67. Ink jet printing is disclosed in column 25, line 63, to column 26, line 24.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JP 7330825 A (Derwent Abstract submitted by applicant) discloses low viscosity compositions comprising a (meth)acrylate (A) and a multi-functional (meth)acrylate (B) and a photoinitiator, wherein the polymerized cured material has a Tg of -10 to 50 <sup>0</sup> C.

Johnson et al (6,593,390) disclose radiation curable ink jet ink compositions having a viscosity not greater than 35 mPa.s at 30<sup>0</sup>C. Verdonck et al (6,300,388) disclose ink compositions comprising an amino functionalized polyetheracrylate. Carlson et al (6,534,128) disclose ink incorporating low viscosity radiation curable polymer urethane oligomers.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan W Berman  
Primary Examiner  
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SB  
3/3/05